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POP CORN FOR THE HOME.

BY

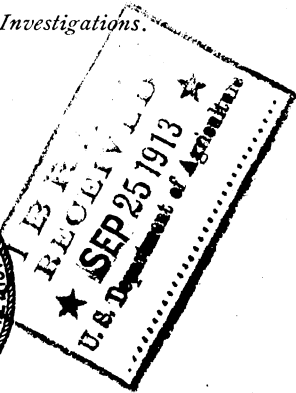
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U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF PLANT INDUSTRY,
OFFICE OF THE CHIEF,
Washington, D. C., May 6, 1913.

SIR: I have the honor to transmit herewith a manuscript entitled "Pop Corn for the Home," by Mr. C. P. Hartley, Physiologist in Charge of Corn Investigations, and Mr. J. G. Willier, Scientific Assistant, Office of Corn Investigations, and recommend that it be published as a Farmers' Bulletin.

Respectfully,

WM. A. TAYLOR,
Chief of Bureau.

Hon. D. F. HOUSTON,
Secretary of Agriculture.

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POP CORN FOR THE HOME.¹

INTRODUCTION.

Among the things that add pleasure to country life, pop corn should be given a prominent place. For affording a pleasant and healthful treat for the family during the long winter evenings and the holiday season it probably has no equal. The crisp, flaky pop corn is dear to the children's palate and the "pop corn and Christmas hemlock spurting in the fire" have been enjoyed by both old and



FIG. 1.—Pop corn in the garden.

young for many generations. If every farm home would keep a supply of pop corn and a popper convenient, fewer nickels would be spent for less wholesome knickknacks and more enjoyable evenings would be spent around the family hearth.

Besides being a source of entertainment for the children, pop corn has considerable value as a food, and when properly prepared for

¹ For information regarding the growing of pop corn on a commercial scale, see Farmers' Bulletin 554, entitled "Pop Corn for the Market."

the table it is superior to many of the breakfast foods now on the market.

THE HOME PLAT.

It is customary on many farms where it is not desired to grow pop corn as a market crop to plant a few rows of it in the garden for home use. This phase of farming usually interests the children and it is well to let them do the planting. Pop corn readily mixes with field corn and sweet corn planted near it, and as this mixing renders it unsuitable for seed purposes some of the old seed should be saved for next year's planting or good seed should be procured from some other source.



FIG. 2.—A high-school principal and his plat of pop corn.

If it is desired to grow pop corn as a field crop, the surplus stock that is not wanted for home use can usually be sold to local merchants at a fair price, or a profitable local trade may be built up by supplying it direct to consumers. Both of these methods should enable consumers to get a first-class article at a lower price than it would cost on the general market. This practice is to be encouraged, as it enables consumers to make their own pop-corn confections and thus have them fresh, in which state they are at their best, and when it is considered that \$30 worth of popped corn in the form of 5-cent packages represents an outlay of only about \$1 or \$1.50 for raw material the economy of this practice is evident. Sufficient pop

corn to make \$30 worth of 5-cent packages of popped corn can be grown on a piece of land 40 feet long and 20 feet wide. See figures 1, 2, 3, and 4 for methods of planting pop corn in fields and gardens.

CHOICE OF A VARIETY.

There are a large number of varieties of pop corn, from which selection can be made to suit almost any desire or fancy. Seedsmen catalogue not less than two dozen different varieties, though in a number of cases the same variety is listed under various names by different dealers. Many prefer the colored varieties for home use and these usually please the children more than the standard commercial varieties shown in figures 5, 6, and 7. The ears of the Little Tom Thumb and the popped kernels of the Eight-Rowed varieties are popular for Christmas-tree decorations.



FIG. 3.—A pop-corn field in the Connecticut River Valley.

Almost any variety of pop corn will give satisfactory results if properly handled, and by the judicious selection of seed the chosen variety can be greatly improved.

PLANTING POP CORN.

In order to succeed best with pop corn for home use it should not be left until the field and truck crops have been planted, but should be planted early, so it will have a long season in which to grow and mature. If harvested in an immature condition it will not give as flaky and crisp pop-corn balls as can be made from fully ripened corn. A good time to plant is when the oak trees begin to show their new leaves. A warm, well-drained location, free from marshy places, should be selected. A sandy loam, if available, is best. The soil should be plowed or spaded to a depth of 8 inches or more and the surface of the plat thoroughly pulverized before planting. The rows should be about 3 feet apart. A small furrow 2 or 3 inches

deep is sufficient. The kernels should be dropped 8 or 10 inches apart in the row and covered to a depth of about 1 inch. The planting should be done before the moist soil in the furrow has had time to dry out.

CARE OF THE GROWING CROP.

Grass and weeds should be kept down as much as possible while the corn is making its early growth, and the soil should be kept loose over the surface by frequent cultivation or hoeing. If only a small plat is planted it is better to plant a number of short rows,



FIG. 4.—A field of White Rice pop corn in Vermont.

as this will admit of the silks becoming better pollinated and will give better filled ears than would result from the growing of one long row.

HARVESTING AND STORING POP CORN.

The ears should be husked from the standing stalk and should be spread out in a well-ventilated place to dry and cure. The ears should not be piled up in a large heap or sacked before they are well dried out. It is best to leave the corn on the stalks until the

husks are white and dry and the stalks have lost their sappy condition. The ears may be stored in any place where the air can circulate around them freely and where they are safe from birds, mice, and squirrels. An overhead rack made of narrow slats or wire netting and suspended by wires in the wagon shed will be a good storing place for pop corn, or the ears may be strung up and suspended from rafters in the garret. Pop corn should not be stored in a warm or heated room, as it will dry out too much. Wire crates made of fine-mesh wire are convenient for storing it and afford protection against rats and mice.

New pop corn may be used for popping as soon as it has dried out sufficiently. If properly stored it may be ready for use by Christmas. If old pop corn will not pop on account of having become too dry, the popping quality may be somewhat restored by moistening or sprinkling with water before popping. If very dry it should be soaked in water for awhile and then spread out to dry for a few days before using, or the dry corn may be put in a shaded place outdoors for a time, where it can absorb moisture from the open air. Pop corn usually pops best when it contains about 12 per cent of moisture. If the popping quality has been injured by freezing while yet green or immature, by harvesting before ripe, or by heating in curing, or if moths and weevils have damaged the corn the trouble can not be remedied by these methods.

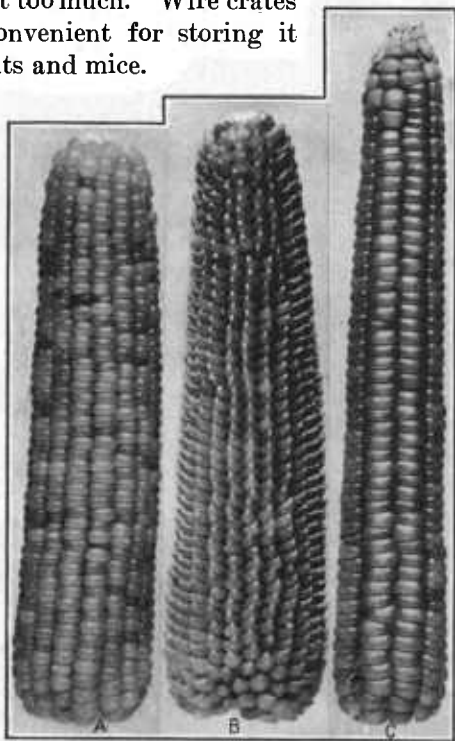


FIG. 5.—Ears of common varieties of pop corn : A, White Pearl ; B, White Rice ; and C, Eight-Rowed. White Rice, the leading variety of pop corn, is grown more extensively than any other kind. The large size of the popped kernels of Eight-Rowed makes this variety prized for Christmas decorations.

HAND POPPERS.

In figure 8 are shown types of hand poppers. A popper like No. 1 can be used for popping corn in butter and lard. A common skillet supplied with a tin lid will answer the same purpose. No. 4 is a

favorite style of popper and is carried in stock by many stores. It costs only 10 cents. The only objection is its small size. No. 3 is a satisfactory homemade wire popper.

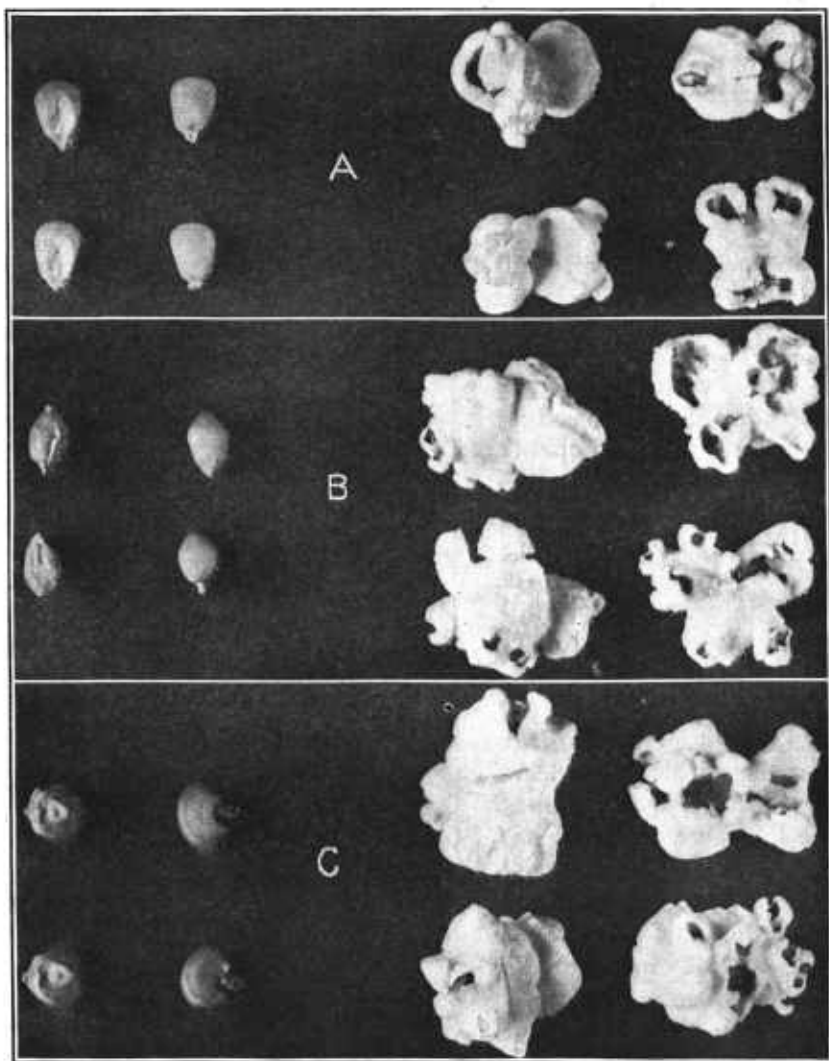


FIG. 6.—Unpopped and popped kernels of the principal varieties of pop corn: A, White Pearl; B, White Rice; and C, Eight-Rowed.

HOW TO POP CORN.

For good results in popping, the main requisites are good corn and a good hot fire. In popping, certain precautions may be observed to good advantage.

Do not take too much pop corn at one time, not more than enough to barely cover the bottom of the popper one kernel deep. Hold the popper high enough above the fire or heat to keep from burning the kernels or scorching them too quickly. The right degree of heat for best results in popping should make good corn begin to pop in $1\frac{1}{2}$ minutes. This should give the maximum volume increase in popping. If it begins to pop in less time or if a large quantity of corn is put into the popper, it will not pop up so crisp and flaky. If it takes much longer for the popping to begin, the heat is probably not great enough or the pop corn is of poor quality, or there may be other interfering causes, such as drafts of cold air.

To preserve the snowy whiteness of the popped kernels, the flame must be kept from striking them. This can be done by placing a plate of iron or a stove lid between the corn and the fire if a wire popper is used or by using a pan popper if popping directly over a flame.

If the pop corn is in first-class condition and the heat properly applied, 1 pint of unpopped corn should give 15 to 20 pints of popped corn.

HOME USES.¹

Pop corn is usually popped to be eaten at once, or it may be made into pop-corn balls, crackajack, or other forms of pop-corn confection. A common way of preparing it is by popping and sprinkling it with salt or adding salt and melted butter. Sometimes the popped corn is eaten with milk and sugar like a breakfast food. The parched unpopped kernels when ground like coffee make a very good breakfast food for eating with cream and sugar or for boiling with water and serving like oatmeal. Some pop-corn venders make a palatable preparation by popping the corn in melted butter and lard with salt added.



FIG. 7.—Stalks of White Rice pop corn.

¹ For information regarding the food value of pop corn, see Farmers' Bulletin 298, entitled "Food Value of Corn and Corn Products."

It is customary on some farms at butchering time in the fall to wind up the day's work by cooking a kettle full of pop corn. This is done by popping the corn in the greasy residue left in the kettle after the lard has been rendered. Salt is added to suit the taste and may be cooked in with the grease.

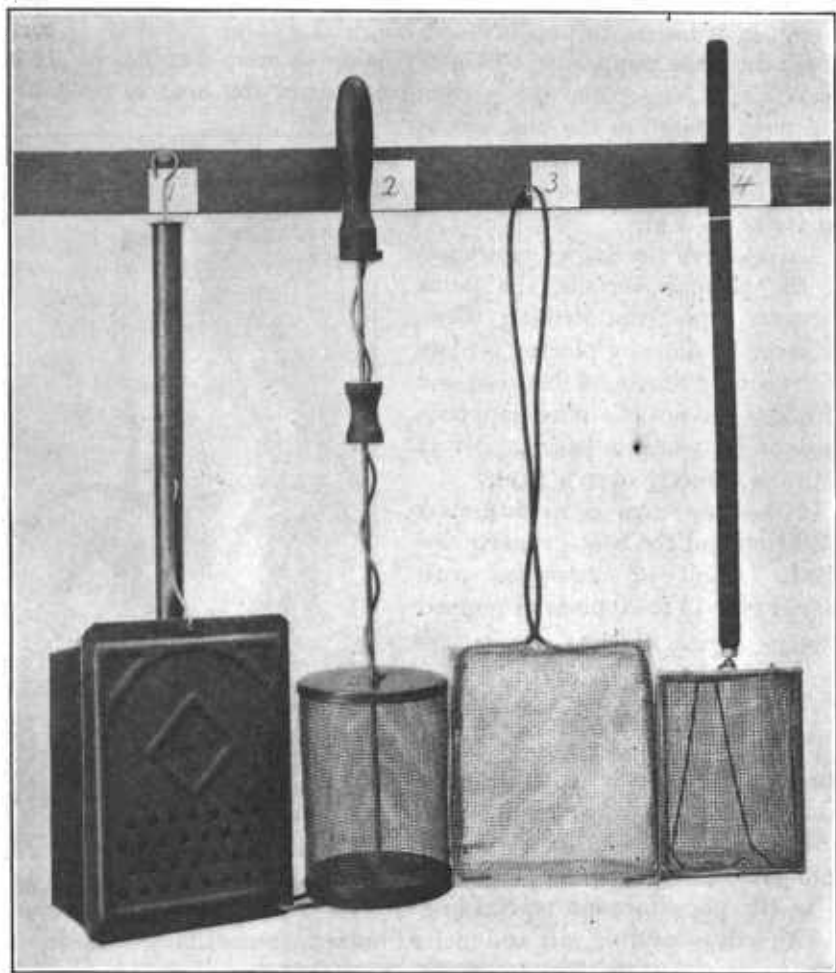


FIG. 8.—Four different types of hand poppers.

In many farmhouses the delicious pop-corn cake is considered a necessary adjunct to the Christmas festivities and is regarded as a superior article of food.

Dealers who put up shelled pop corn in 10-cent packages for the retail trade usually have a number of good recipes printed on the

outside of the packages. Cookbooks also give splendid recipes for making pop-corn confections. The following have given good results:

CHOCOLATE POP CORN.

2 teacupfuls of white sugar.	2 ounces of chocolate.
$\frac{1}{2}$ cup of corn sirup.	1 cup of water.

Put these ingredients into a kettle and cook them until the sirup hardens, when put in cold water. Pour over 4 quarts of crisp, freshly popped corn and stir well to insure the uniform coating of the kernels.

SUGARED POP CORN.

Make a sirup by boiling together 2 teacupfuls of granulated sugar and 1 teacup of water. Boil until the sirup strings from the spoon or hardens when dropped into cold water. Pour over 6 quarts of freshly popped corn and stir well.

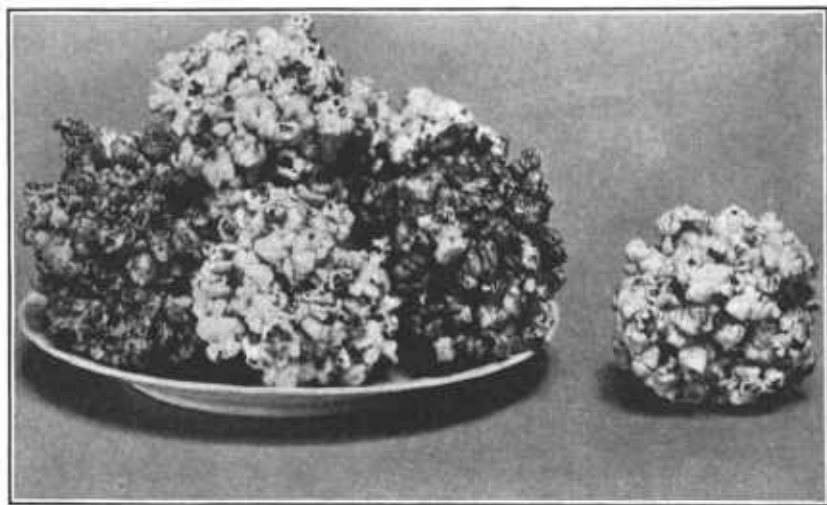


FIG. 9.—Homemade molasses and sirup pop-corn balls.

POP-CORN BALLS.

1 pint of sirup.	2 tablespoonfuls of butter.
1 pint of sugar.	1 teaspoonful of vinegar.

Cook till the sirup hardens when dropped into cold water. Remove to back of stove and add one-half teaspoonful of soda dissolved in a tablespoonful of hot water and then pour the hot sirup over 4 quarts of freshly popped corn, stirring till each kernel is well coated, when it can be molded into balls or into any desired form.

The pop-corn balls shown in figure 9 were made by this last recipe. The darker balls were made by using New Orleans molasses and the lighter colored ones by the use of maple sirup. Any good sirup or molasses can be used.